Advanced Technology Program

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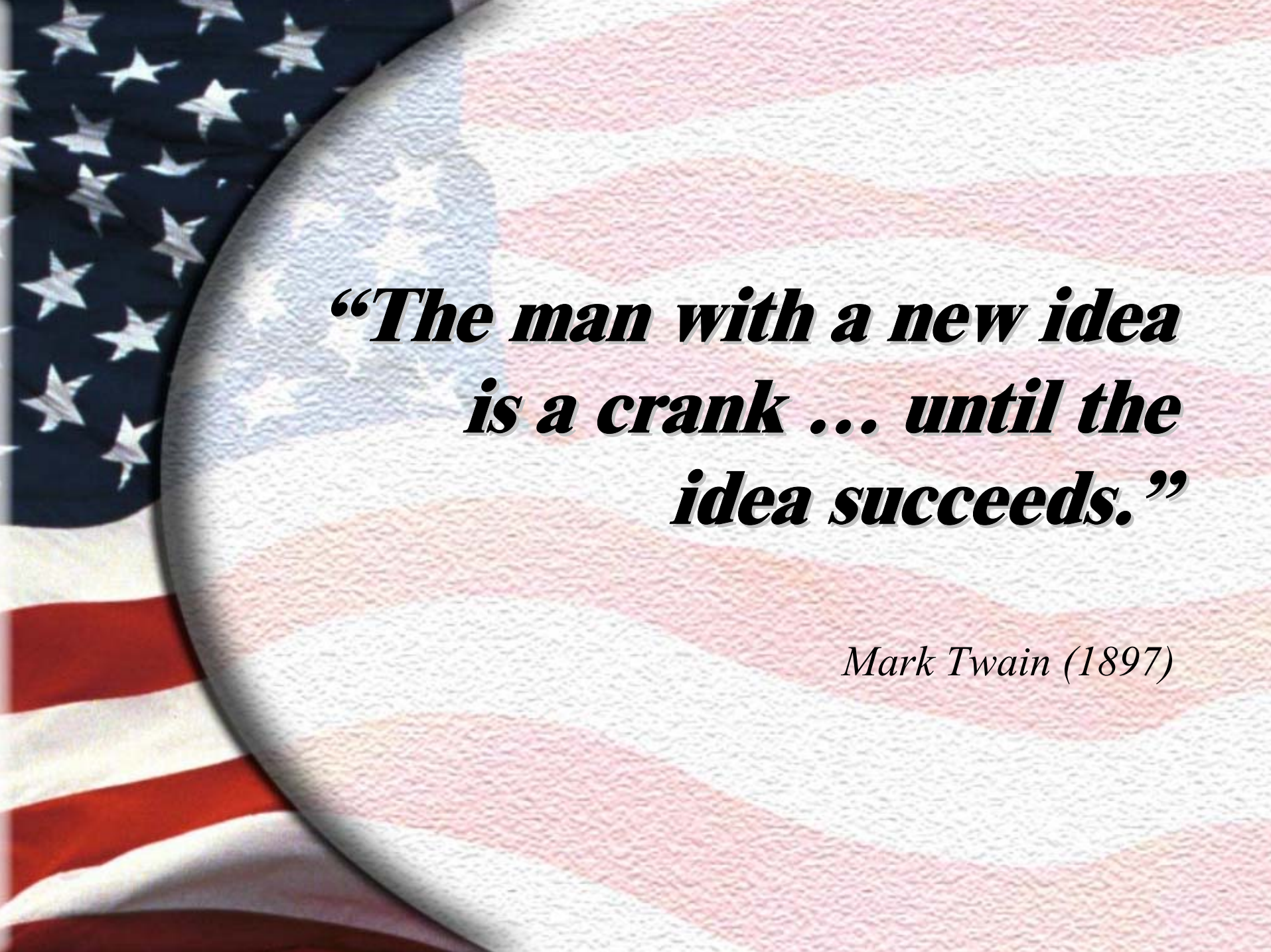
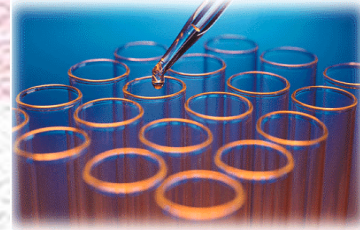

“The man with a new idea is a crank … until the idea succeeds.”
Mark Twain (1897)

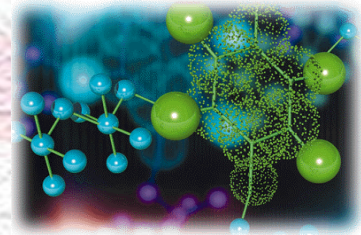
ATP Mission …

To accelerate the development of innovative technologies for broad national benefit through partnerships with the private sector.

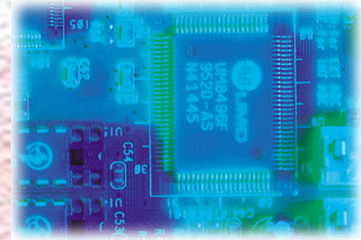
Chemistry



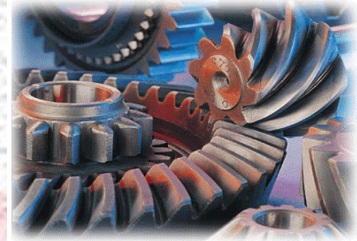
Biotechnology



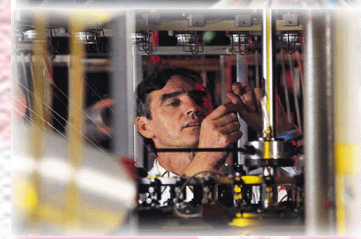
Electronics



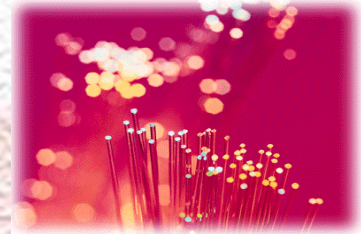
Manufacturing



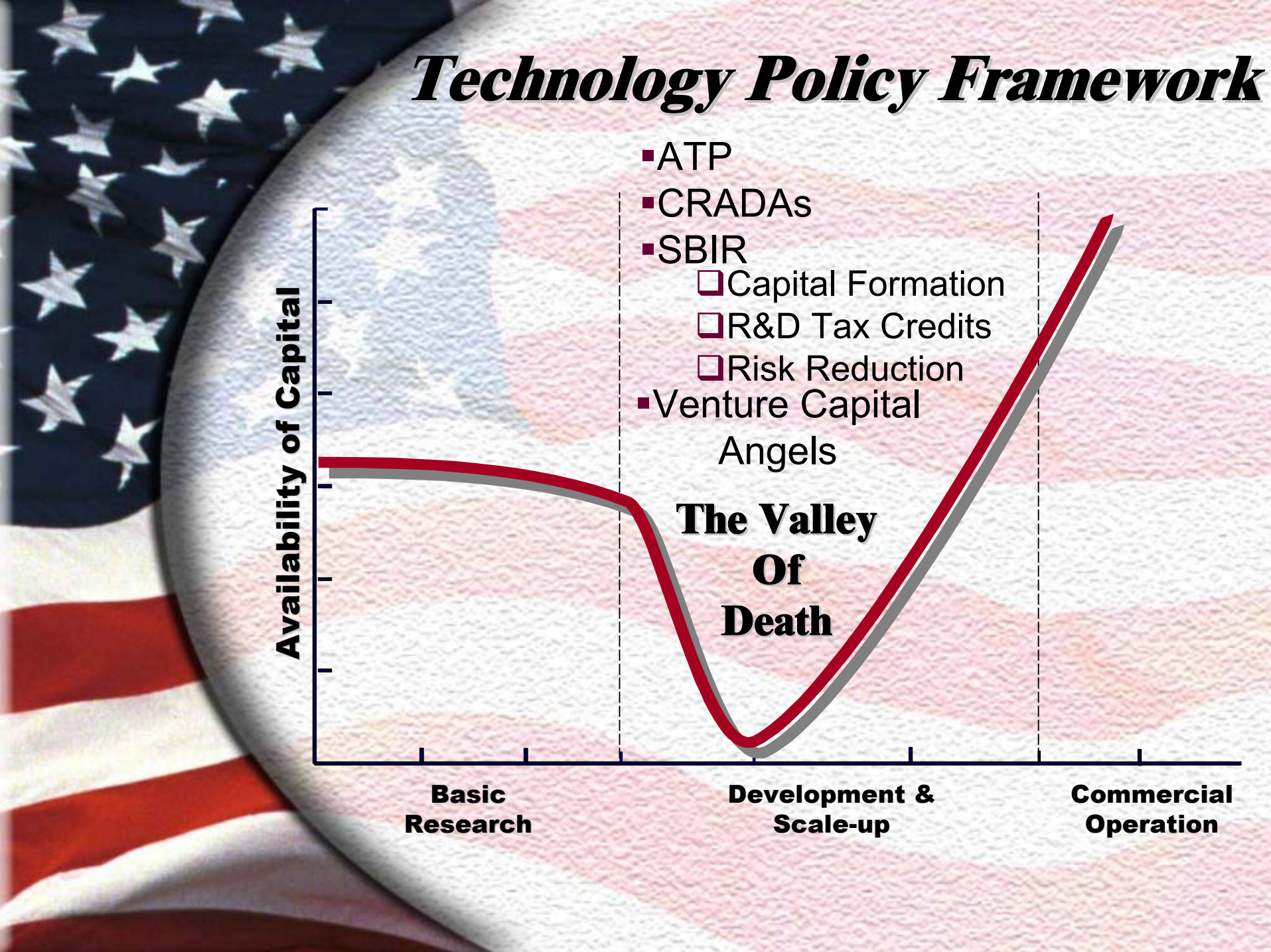
Advanced Materials



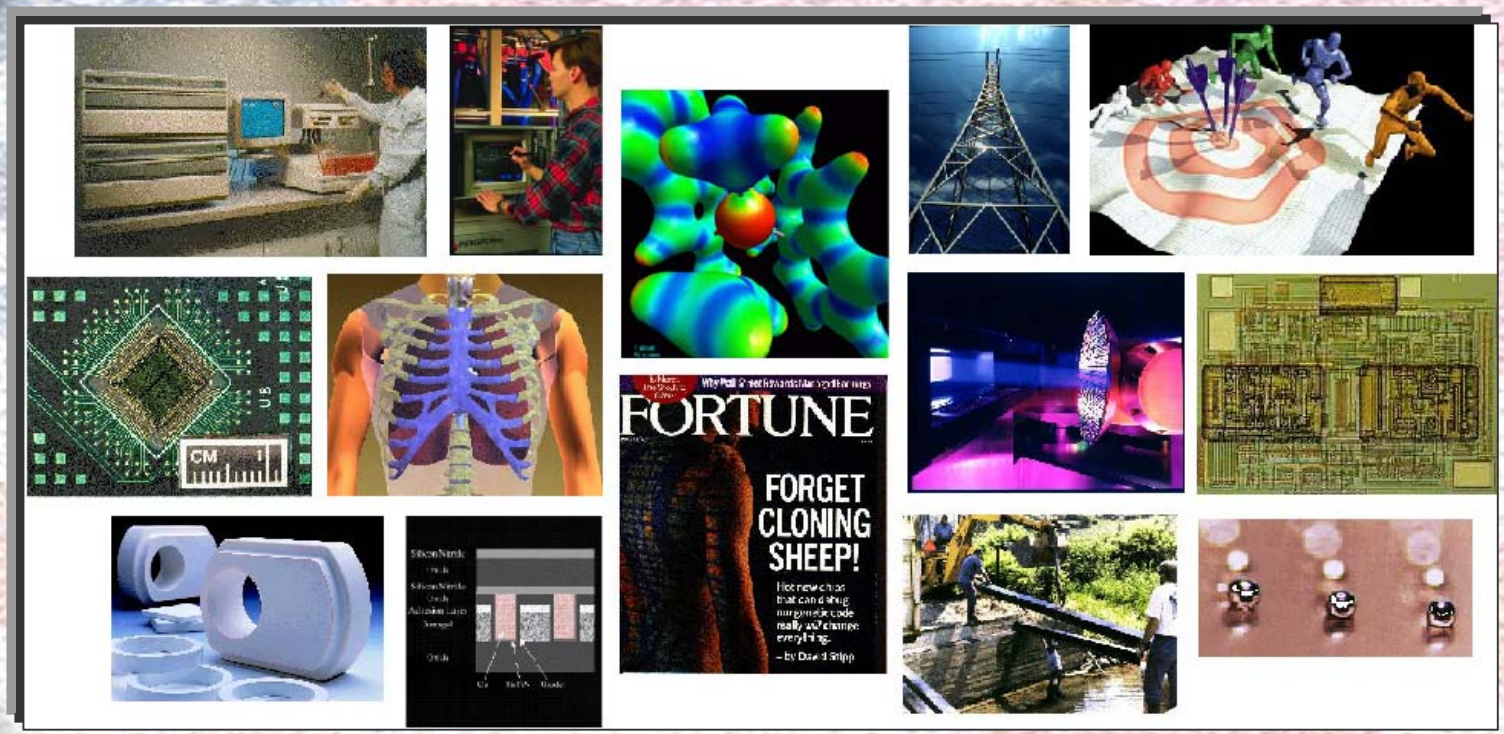
Photonics



Technology Policy Framework



Exciting New Technologies …



Bridging the Gap Between the Laboratory and the Marketplace

The Difference ATP Makes

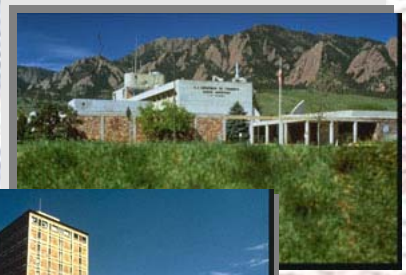
With the ATP, R&D is:

- Higher risk
- Creating leap-frog technologies
- Leading to multiple applications
- Expanding company and national competencies
- Broadly diffused

ATP

NIST Mission

Gaithersburg, MD



Boulder, CO

Rockville, MD

Strengthen *the U.S. economy and* ***improve*** *the quality of life by working with industry to develop and apply technology, measurements, and standards.*

ATP is part of NIST

- 3,300 employees
- $800 million annual budget
- 1,200 industrial partners
- 2,000 field agents
- 1,550 guest researchers
- $1.5 billion co-funding of industry R&D
- National measurement standards

Helping America Measure Up

The Competitive Environment

- Advances in technology account for more than *50 % of U.S. economic growth*
- Global competition has forced a focus on *short-term return* on investment
- Now more than ever, our nation's economic well being depends on *rapid development and commercialization* of technology

A Decade of Innovation

- Since 1990, **4,696 proposals** submitted to **42 competitions**, requesting **$10.1 B** from ATP
- **581 projects awarded** with **1,250 participants** and an equal number of subcontractors
- **185 joint ventures** and **396 single companies**
- **$3.6 billion** of **high-risk research** funded
  - ***ATP share = $1.8 billion***
  - ***Industry share = $1.8 billion***
- Small businesses are thriving
  - ***61% of projects led by small businesses***
- Over **150 universities** participate
- Over **25 national laboratories** participate

Today's Investments …

Electronics and Photonics ($419 M)

- Microelectronics
- Optoelectronics
- Optics Technologies
- Power Technologies
- Wireless Electronics
- Organic Electronics

Biotechnology ($343 M)

- DNA Technologies
- Tissue Engineering
- Drug Discovery Methods
- Proteomics
- Medical Devices and Imaging
- Microfluidics

Manufacturing ($218 M)

Information Technology ($423 M)

- Advanced Learning Systems
- Component-Based Software
- Digital Video
- Information Infrastructure for Healthcare
- Electronic Commerce
- Dependable Computing Systems
- Technologies for the Integration of Manufacturing Applications

Chemistry and Materials ($401 M)

- Chemical Processing Sensors
- Metabolic Engineering/Catalysis
- Combinatorial Methods
- Separations/Membranes
- Materials Processing
- Advanced Materials
- Nanotechnology
- Material Interfaces

ATP Awards to Date by Technology Area

Forty Two Competitions (1990-2001)

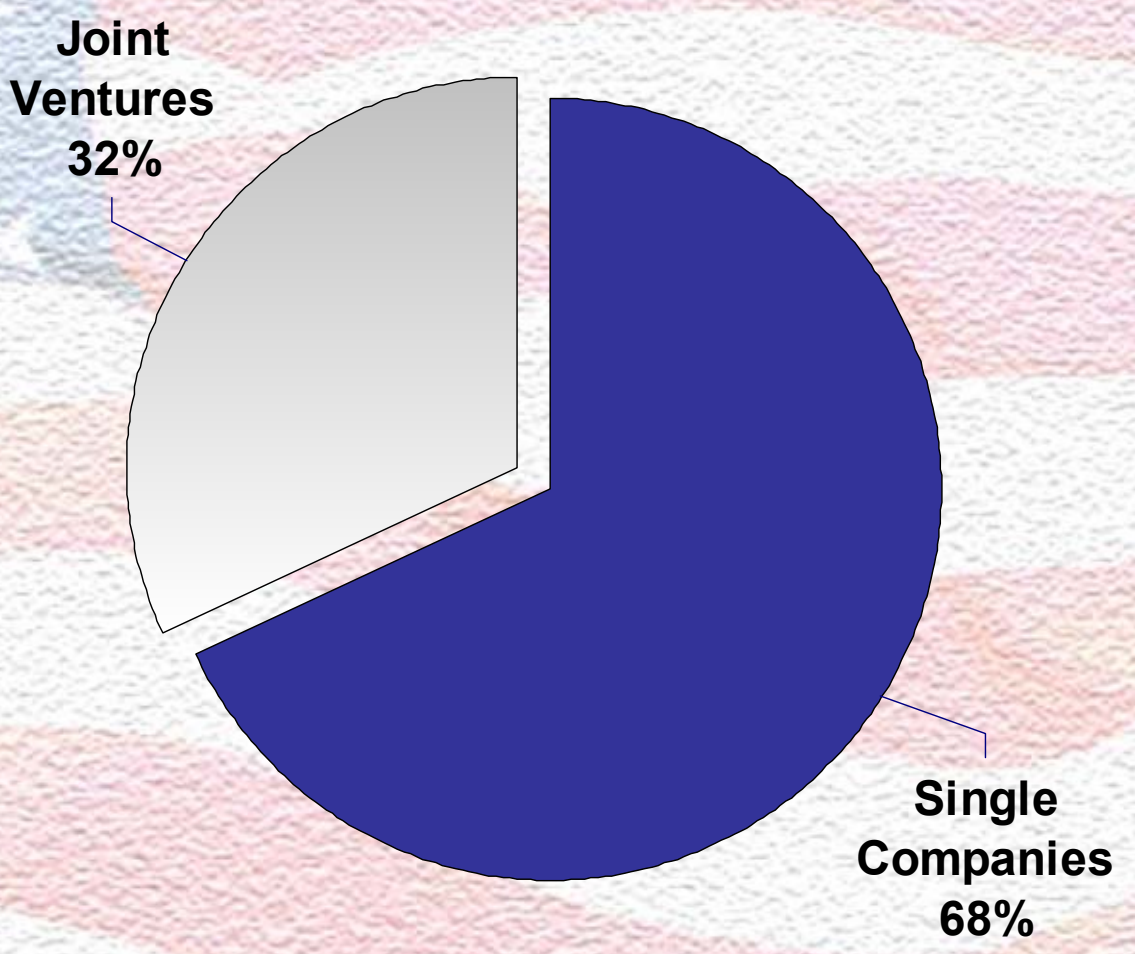
As a Percent of $1,804 M Awarded

Technical Disciplines	
Advanced Materials/ Chemistry	22%
Biotechnology	19%
Electronics/ Photonics	23%
Info Tech	24%
Manufacturing	12%

Total Investment	
Advanced Materials/ Chemistry	$397 M
Biotechnology	$343 M
Electronics/ Photonics	$415 M
Info Tech	$433 M
Manufacturing	$216 M

Participation in the ATP

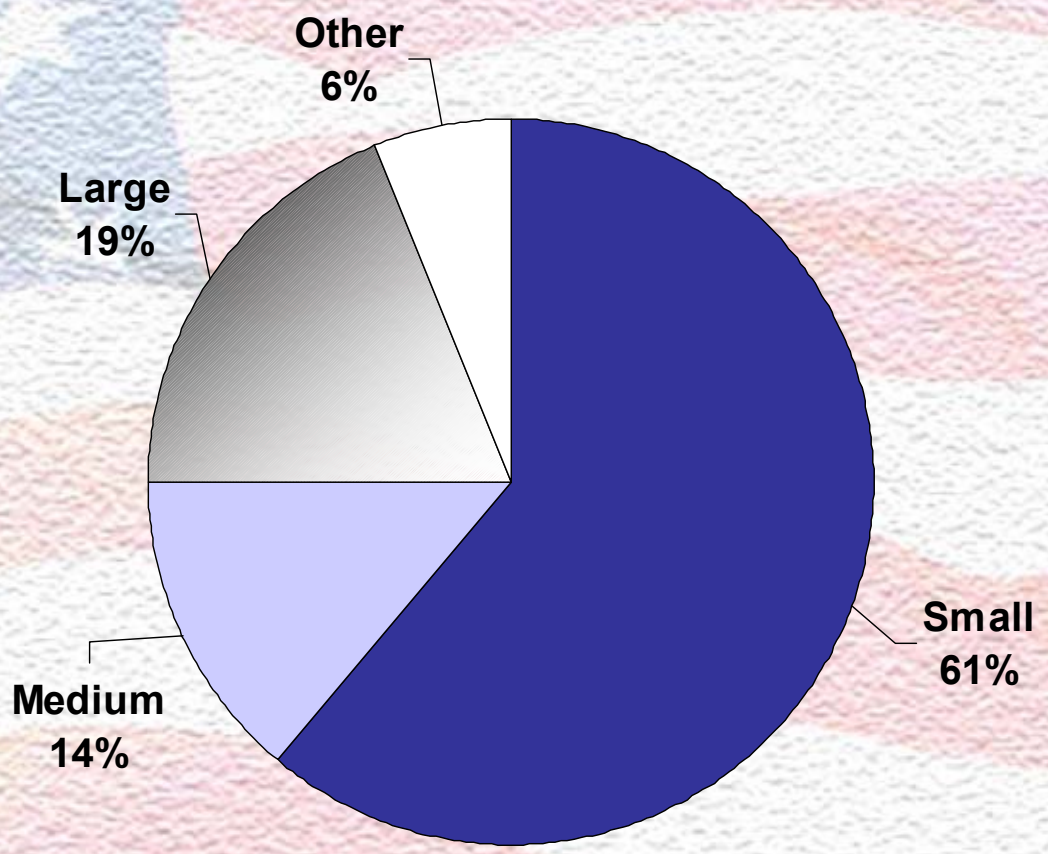
581 ATP Awards*



*42 Competitions (1990 - September 2001)

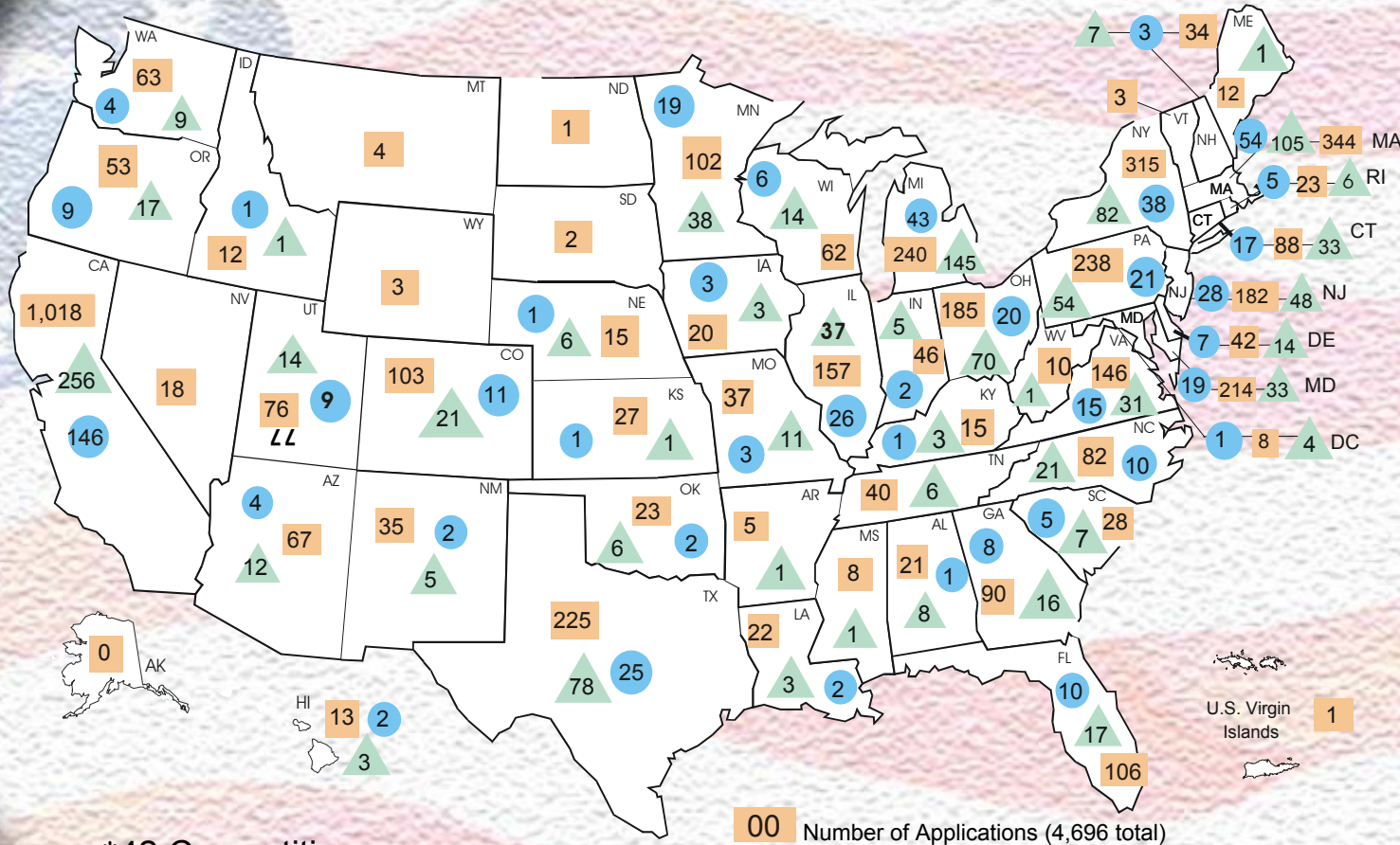
Distribution of Company Size Lead Companies

581 ATP Awards*



*42 Competitions (1990 - September 2001)

ATP Applications, Awards, & Participants by State*



*42 Competitions
(1990 - September 2001)

00 Number of Applications (4,696 total)
00 Number of Awards (581 total)
00 Number of Participating Organizations (1,250 total)

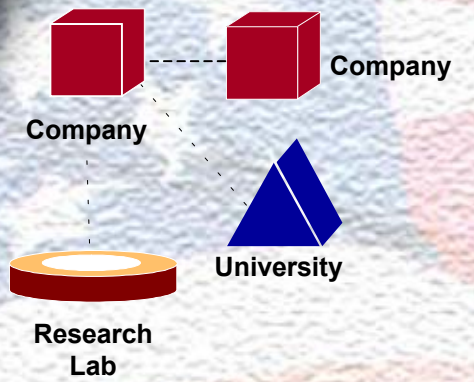
* Geographic location is not a consideration in project selection. The ATP has an active outreach program that seeks to increase awareness across the entire nation of the program's opportunities for small, medium, and large businesses and other organizations. To date, ATP has received applications from organizations based in every state, except Alaska, and has provided funding to participating organizations located in 40 states, and the District of Columbia.

Two Ways to Apply

As a Single Company:

Alone

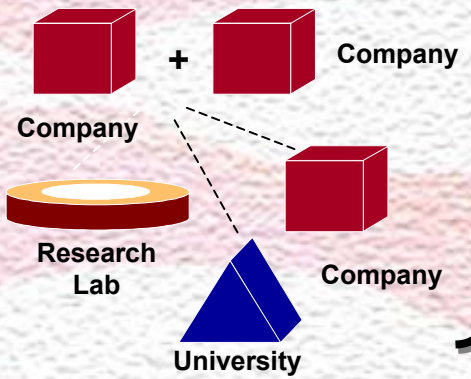
With Subcontractors



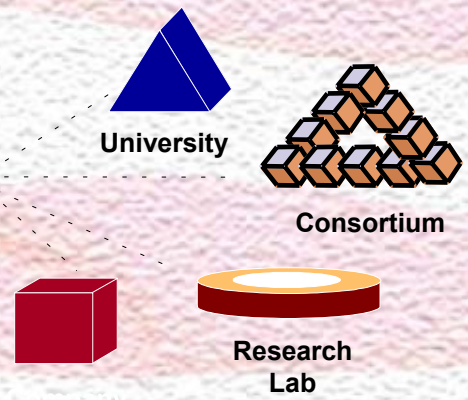
- For-profit company
- 3-year time limit
- $2M award cap
- Company pays indirect costs
- Large companies cost share at least 60% of total project cost

As a Joint Venture:

Formal Alliances



With Subcontractors



- At least 2 for-profit companies
- 5-year time limit
- No limit on award amount (other than availability of funds)
- Industry share >50% total cost

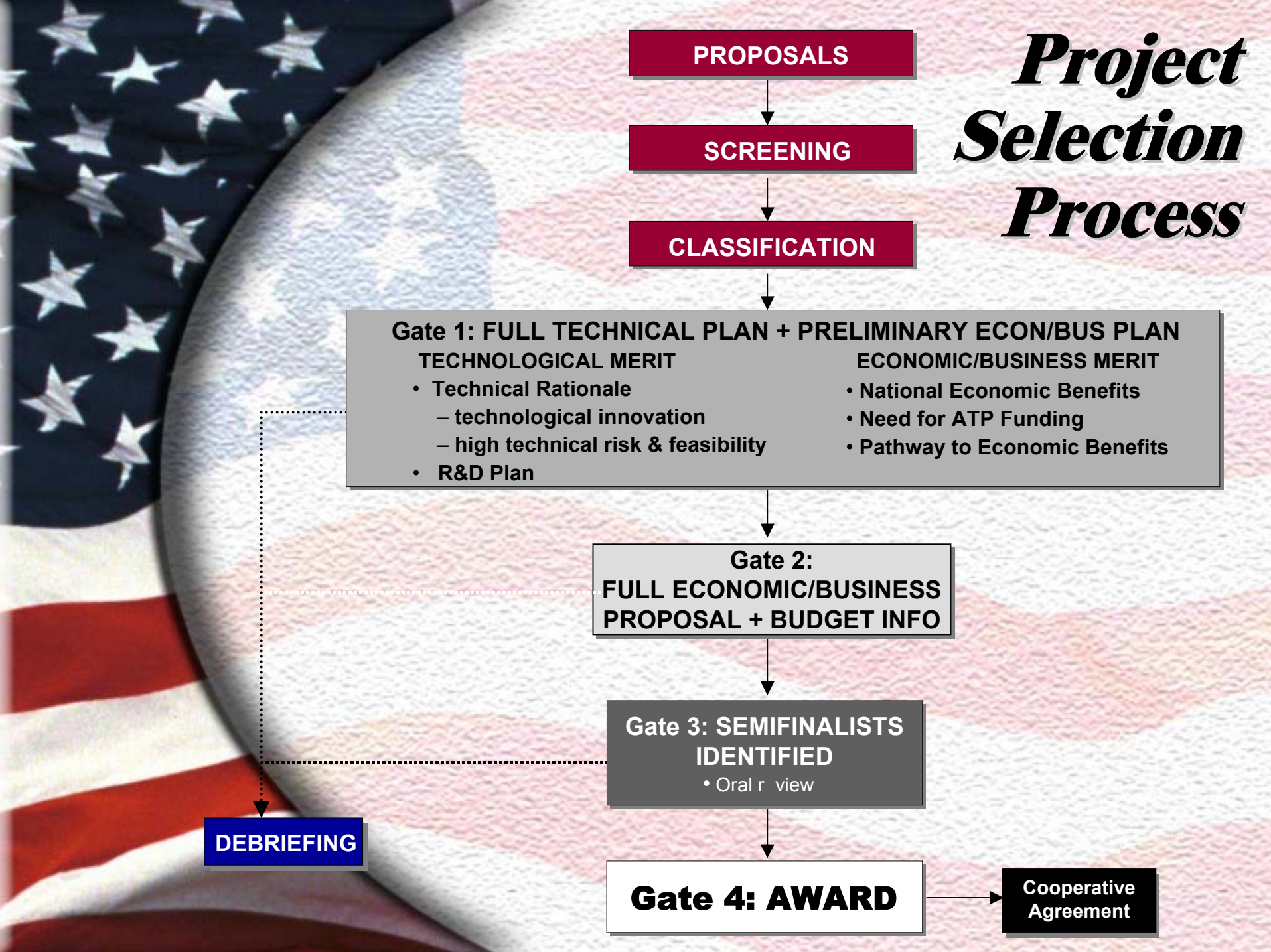
- ***ATP encourages teaming arrangements***
- ***Most projects involve alliances***

Two Major Criteria

- **Scientific and Technological Merit** (*50%*)
  - Technical Rationale
    - ✓**high technical risk & feasibility**
    - ✓**technological innovation**
  - R&D Plan

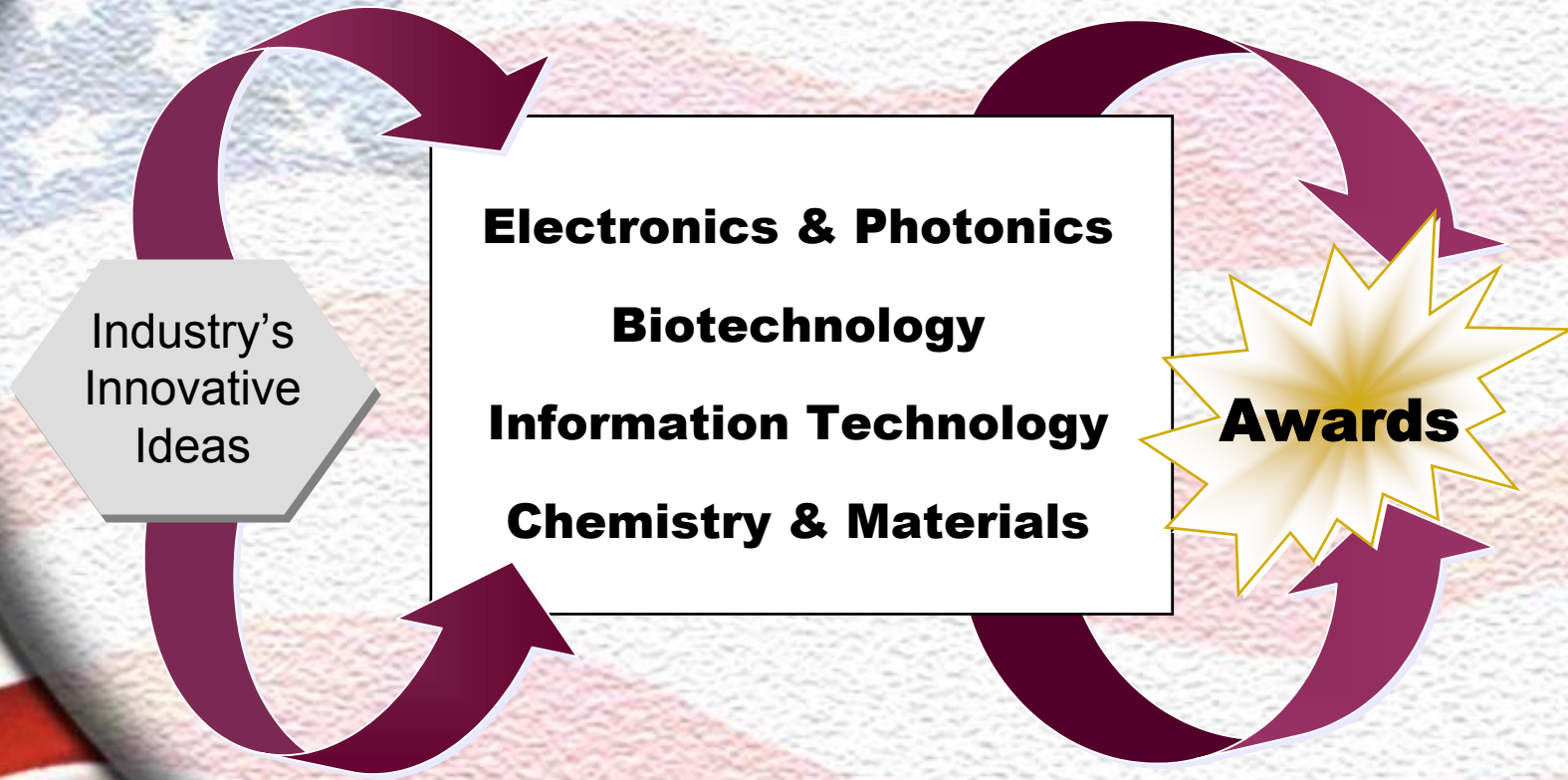
- **Potential for Broad-Based Economic Benefits** (*50%*)
  - National Economic Benefits
  - Need for ATP Funding
  - Pathway to Economic Benefits

Project Selection Process



Competition Structure

2002 Technology-Specific Project Selection Committees



For Info on ATP and to Join Our Mailing List . . .

- Call toll-free: 800-ATP-Fund (800-287-3863)
- Fax your name and address to: 301-926-9524
- Send e-mail to: *atp@nist.gov*
- Visit ATP's website: *www.atp.nist.gov*